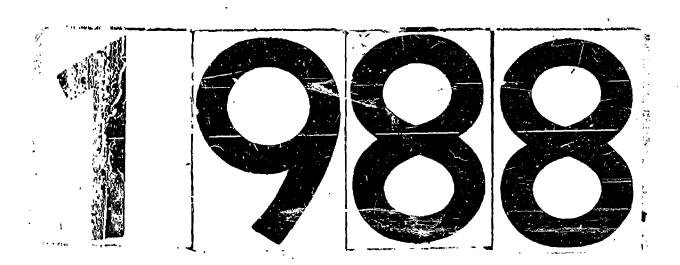
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TAM PRESSURES PERSANCE College Avenus Pool

Marsh 11, 1952

Director Office of Maval Research Branch Office 1000 Geory Street San Francisco 9, California



POSTHIN MATUS REPORT - VARROARY 1952

Contract My-onr-295-Rask 3 Project Musber E 061-003

Dear Sir:

Progress on the contract for the month of February has been as follows:

- l. The vacuum charter of the molecular beam equipment has been look detected and minor changes made to improve the base pressure of the system. Cage and source tubulations have been designed, fabricated and assembled.
- 2. A series of runs were made in the Ho. 3 Wind Tunnel in February to determine shock wave location, using small pressure probes. This work, under a Wright-Fatterson Air Development Command contract, is concerned with the effect of air or nitrogen glow upon stream properties as indicated by shock wave locations.
- 3. An investigation of base pressure, using a cone-cylinder model, is the next program scheduled for the No. 3 Mind Tunnel. The basic model to be studied is geometrically similar to the model used by S. M. Bogdonoff of Princeton University as reported in Aeronautical Engineering Laboratory report 182, June 12, 1950. A preliminary investigation of mounting techniques is being carried out to determine the influence of a sting support upon the base pressure. The model for the preliminary tests will be supported by fine wires (0.003 inch diameter).
- 4. The semi-adjustable diffuser has been completed. A test progrem for this equipment has been scheduled for the Ho. 3 Wind Tunnel.
- 5. A two-dimensional adjustable norale with divergent side walls is being designed for the No. 3 Wind Tunnel based upon the results of a test program in the No. 2 Wind Tunnel, (see item 5 of the October 1951 status report). A similar range of Mrch number will be covered with a larger test area.
- 6. Preliminary tests of the force sensitive element purchased for use on the three component balance have been made. Further tests of both the force sensitive element and the florure pivets will be made in March.

- 7. So additional shop work has been devoted to the Z = 4.0 (ideal) axisymmetric nossie due to the press of other urgant programs.
- 8. Dr. R. G. Folson presented two lectures at U.C.L.A. on February 28th and 29th, entitled "The Field of Rarefied Gas Dynamics" and "Experimental Aspects of the Dynamics of Rarefied Gasss."

9. Visitora:

Lieut. Horsen Fishmen

- OR - San Francisco

Haval Officers (30)

- Maval War College, Monterey, California

Kenneth Rasak

- Univ. of Wichita, Wichita, Harses

William Besler

- Besler Corp., Excryville 8, California

Arthur Denning

- Director & Vice Chanceller, New South

Wales, Univ. of Technology, Sidney

Australia.

Very truly yours,

R. G. Folson, Faculty Investigator

MIF BP

co - OHR SP (1), OHR HASH. (5)
Colorel F. Seiler, AMC WASH. (2)
Mieut-Col. J.H. Clayton, Hdqts. USAFRASE. (1)
Capt. F.K. Kelson, Los Angeles Eng. Field Stn. (1)
Dr. Morton Alperin, Western Regional Office,
Hdqts. ARDC, 55 S. Grand Ave., Pasadena, Calif. (1)
Fluid Mechanics Branch, Office of Scientific Research
Research & Development Command, P.C. Box 1395,
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